

### **REMARKS**

This responds to the Office Action mailed on January 17, 2007.

Claim 1 is amended, no claims are canceled, and claims 2-6 are added; as a result, claims 1-6 are now pending in this application.

### **Claim Objections**

Claim 1 was objected to on line 3 because the letter N is not described what is referred to. Applicant has amended claim 1 to further clarify the claim. Applicant respectfully requests reconsideration and the removal of the objection to claim 1.

### **§102 Rejection of the Claims**

Claim 1 was rejected under 35 U.S.C. § 102(e) as being anticipated by Mai et al. (US 2004/0036636 A1) (hereinafter as Mai). Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, “[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim*.” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). Applicant respectfully submits that Mai does not anticipate claim 1 because claim 1 as amended recites elements not found in Mai.

For example, claim 1 as amended recites “modulating the train of pulses over a plurality of modulating frequencies using an N-tone Sigma-Delta modulator, wherein the plurality of modulating frequencies are orthogonal.” Applicant has reviewed Mai and can find no disclosure related to the use of a plurality of orthogonal modulating frequencies to generate output signals. As a result, Mai fails to disclose each element of claim 1. Therefore Mai does not anticipate claim 1. Applicant respectfully requests reconsideration and the withdrawal of the rejection of

claim 1.

§103 Rejection of the Claims

Claim 1 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Fullerton et al. (U.S. Patent No. 5,677,927)(hereinafter as Fullerton) in view of Mai et al. (U.S. 2004/0036636 A1)(hereinafter as Mai). In order for a *prima facie* case of obviousness to exist, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)). Applicant respectfully submits that the combination of Fullerton and Mai fails to teach or suggest each all of the elements of claim 1.

For example, claim 1 recites "modulating the train of pulses over a plurality of modulating frequencies using an N-tone Sigma-Delta modulator, wherein the plurality of modulating frequencies are orthogonal." As noted above, Mai fails to teach the use of a plurality of orthogonal modulating frequencies. Further, Applicant has reviewed Fullerton, and can find no teaching or suggestion of the use of a plurality of orthogonal modulating frequencies to generate output signals. Thus neither Fullerton nor Mai, alone or in combination, teach or suggest each and every element of claim 1. As a result, the combination of Fullerton and Mai does not render claim 1 obvious. Applicant respectfully requests reconsideration and the withdrawal of the rejection of claim 1.

New Claims 2-6

Claims 2-6 have been added in this response. Support for claims 2-6 may be found throughout the specification and in particular on page 8, line 25 to page 10, line 15. Applicant believes that no new matter has been introduced with the addition of claims 2-6.

Claims 2-6 depend from claim 1, which as discussed above is allowable. Applicant respectfully submits that claims 2-6 are allowable for at least the same reasons as discussed above regarding claim 1.

### **Reservation of Rights**

In the interest of clarity and brevity, Applicant may not have addressed every assertion made in the Office Action. Applicant's silence regarding any such assertion does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art.

**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6954 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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Date July 17, 2007

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**CERTIFICATE UNDER 37 CFR § 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 17th day of July 2007.

Name: Rodney L. Lacy

Signature Rodney L. Lacy